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No. III.

SAFETY RODS FOR BOATS.

The LARGE SILVER MEDAL was presented to C. H. ACKERLY, Esq., Lieut. R.N., for his Safety Rods for Ship's Boats, a Model of which has been placed in the Society's Repository.

*Plymouth, H.M.S. Ocean,
1st November, 1827.*

SIR,

I HAVE the honour to forward by my friend, Lord William Paget, M.P., the following enclosures, being my observations on the Self-acting Safety Rod, as applicable to boats in general; certificates of actual experiments, from the Right Hon. the Earl of Northesk, together with those of the captains commanding his majesty's guard-ships at Plymouth, and others from officers of experience; copies of letters, that the same invention has been received at the Admiralty, with a "model;" as also, from the idea of its universal utility, a letter, in confirmation of the same, from the minister of the French marine, together with a letter of opinion from Monsieur le Baron Dupin, F.R.S., &c. &c., Membre de l'Institut à Paris.

A model illustrating the same, for the Society of Arts, I forwarded yesterday by a friend to London, which I have to request you will do me the honour to lay before your Committee, as also to favour me with a few lines in acknowledgment of the same.

I am, Sir, &c. &c.

A. AIKIN, Esq.
Secretary, &c. &c.

CH. HENRY ACKERLY,
Lieutenant.

Observations on the Self-acting Safety Rod, intended for the preservation of Seamen and others upset in Boats.

The invention is simply the application of an iron or copper rod, two feet in length, and three quarters of a pound in weight, having a transverse piece of seven inches for the feet to rest upon, to be fitted at the extremities of whale-boats and galleys, and to the standing thwarts of others, traversing with perfect freedom, at an angle of 25 to 30 degrees, through two small plates, one screwed on the gunwale, the other to the head-sheets or stern-frame, having a place for a forelock, to admit of its being taken out and cleansed. The metallic rod being square, passes through these plates, and is forelocked underneath.

From the position which the safety-rod occupies, lying on the gunwale, sheltered by the wash-streak, it can in no way interfere with the manœuvring or working of a boat, its oars, sails, sheets, masts, or stowage; but it will rather tend to give stability than otherwise. In launches, it takes the course of their build, and is cased in. On a boat's turning bottom up, the life-preserver slides out, and affords to persons so perilously situated a firm support to the feet, and thereby the means of husbanding their strength till assistance arrives.

The advantage to life-boats of the self-acting safety-rods, when fitted to their standing thwarts, is that of facilitating their being righted on capsizing.

The experiment tried alongside the royal yacht, on the 17th July, 1827, in the presence of his Royal Highness the Duke of Clarence, Lord High Admiral, of Admiral the Earl of Northesk, of Captains Sir W. Hoste, Bart., Sir Edward Owen, K. C. B., Edward Hawker, Esq. (flag-captain,) and of John Barrow, Esq. proves the applicability of this invention to boats.

A waterman's boat, such as ply to his majesty's ships in the sound, 14 feet long and 5 feet 8 inches in the beam, was chosen to exemplify the invention. Three safety-rods were fitted to this boat, one on each side the bow, the other traversing through two square staples driven into the stern-post. On her being upset, these rods supported four men breast-high out of the water, preserving a perfect equilibrium, and doubtless would, even in a rolling sea.

The bilge, or rubbing-batten, in life-boats and galleys, by being continued fore-and-aft, morticed sufficiently to admit the fingers, enables men to hold on with greater facility, and in no way impedes their velocity.

The cheapness of the apparatus is also much in its favour, and will bring it within the reach of the poorest fisherman. The open boats used by these men are occasionally upset in heavy weather, and a serious loss of human life is generally the consequence. It is very probable that in these and similar cases the safety-rods would be found very efficacious.

The model of a gig or galley, which accompanies this communication, is a kind of boat, as much in use in his majesty's naval service as in the commercial, and has been selected as having cost the lives of more seamen than any other. From her great length and narrowness, the safety-rods are placed at the extremities. The black perpendicular lines on each side the keel indicate to persons in the water where to place their feet; and when supported, instinct points out the utility of the morticed bilge-batten, in giving a firm grasp for the hands.

CH. HENRY ACKERLY,
Lieut. H.M.S. Ocean.

CERTIFICATES AND DOCUMENTS.

MONSIEUR, *Paris, le 14e Septembre, 1827.*

J'ai reçu avec la lettre que vous m'avez fait l'honneur de m'écrire de Plymouth, sous la date du 22e Août dernier, le dessein et la description d'une installation inventée par vous, et qui a pour objet de donner aux marins composant l'équipage d'une embarcation qui viendrait à chavirer, les moyens de se soutenir sur l'eau, en attendant qu'on pût venir à leur secours.

J'ai lu cette description avec bien de l'intérêt, et je vous prie de recevoir tous mes remerciemens pour la prompte communication que vous avez bien voulu m'en faire, et qui vous a été inspirée par un sentiment généreux d'humanité.

Je vais donner des ordres pour que l'essai de votre invention ait lieu dans un des ports du roi, et je ne doute point qu'elle n'obtienne en France le même succès qu'en Angleterre.

CHABROL.

A M. CH. HENRY ACKERLY.

MONSIEUR, *Paris, le 4e Octobre, 1827.*

Je vous dois des remerciemens pour l'honneur que vous m'avez fait, en me communiquant votre intéressante invention, relative à la conservation des hommes dans les bateaux chavirés.

On ne peut qu'applaudir à votre intention ; et je pense qu'en beaucoup de circonstances les barres de fer que vous installez dans vos bateaux pourront effectivement contribuer au salut des hommes.

En vous remerciant pour les expressions beaucoup trop obligeantes de votre lettre, j'ai l'honneur d'être, avec une haute considération,

Monsieur,

Votre très-humble et très-obéissant Serviteur,

BENJ. CH. DUPIN.

I hereby testify my opinion as to the experiment of Lieut. Ackerly's invention having been tried before me on the 17th July, 1827; and from the degree of security given to four men when supported by the life-preserving irons, on the boat being turned keel-up, that I conceive his contrivance is well calculated to enable men to lie by a boat so situated, and therefore would tend, in many cases, towards the preservation of life.

NORTHEK,
Admiral.

Lieut. ACKERLY,
H.M.S. Ocean.

H.M.S. Britannia, Hamoaze.

This is to certify, that I witnessed, on the 17th July, 1827, a trial of Lieut. Ackerly's invention for preserving men's lives, by a boat being upset, turned keel-up, when the self-acting safety-rods appeared to answer very well; four men standing easily upon them, and holding by the bottom of the boat.

ED. HAWKER
Captain.

Lieut. ACKERLY,
H.M.S. Ocean.

I am decidedly of opinion, that Lieut. Ackerly's safety-rods will be of the greatest service to such as have the misfortune to be upset in boats in a heavy sea, as it will enable them to hold on with a great facility, and therefore have a greater chance of being preserved.

Having had the misfortune to be upset in a very heavy sea, I observed the men who got on the boat's bottom constantly washed off, which would not have been the case had she been provided with safety-rods ; and as they are fitted at a very trifling expense, and not the least in the way, I strongly recommend their being fitted to all boats likely to be exposed to a heavy sea.

PATRICK CAMPBELL,
Captain H.M.S. Ocean.

Lieut. Ackerly's contrivance, termed safety-rods, may, in my opinion, conduce, in many situations, to saving the lives of men in boats which may be upset, and to which they may have been fitted. The expense of fitting them is trifling, and they can be of no inconvenience when fitted.

I regret not having witnessed the trial of their utility.

E. D. KING,
Captain H.M.S. Windsor Castle.

Gravesend, Torpoint,
Oct. 19th, 1827.

From the circumstance of my having lost a lieutenant and two seamen, when in command of his Majesty's ship *Iphigenia*, at Columbo, in Ceylon, by one of the cutters upsetting, in crossing the Bar in 1817, I feel authorised in granting Lieut. Ackerly this certificate,

in my full concurrence as to the utility of his simple contrivance for the better preservation of persons upset in boats; and in full belief that, had the Iphigenia's cutter been furnished with these live-preserving irons, the service would not have had to deplore the loss of Lieut. Saunders (senior) and two seamen, or his Majesty's 73d regiment three officers drowned at the same time.

JOHN TANCOCK,
Capt. R.N.

From nineteen years' experience as a lieutenant in his Majesty's Navy, I have no hesitation in pronouncing Lieut. Ackerly's safety-rods a very ingenious and highly useful invention; and from having witnessed several accidents occur from boats upsetting, I am of opinion, that had they been fitted agreeably to his plan, many lives would most probably have been saved.

RICHARD INCLEDON,
Senior Lieut. H.M.S. Ocean.

*Reference to the Engraving of Lieut. C. H. ACKERLY'S
Safety Rods for Boats, in case of their upsetting.
Plate IV.*

Fig. 5, a stern view of a boat, and fig. 6, a side view of the bow of a similar boat; *a a*, fig. 5, two T-headed square metal rods sliding freely in the staples *b b b b* on the stern of the boat; *c c*, fore-locks, by which they may be taken out for cleaning; at *d d* two more are placed

within the boat near the stern, and six more T-headed rods *eeeeee*, fig. 6, are placed at the fore end; the three nearest are raised merely to shew them; these slide through metal plates and through the thwarts. Fig. 7 shews one of the rods and its two plates, *f* and *g*, separate: the plates *f* are screwed on to the gunwale *h*, and the plates *g* to the thwarts, as shewn in fig. 8, the square holes being bevelled to suit the rake of the boat, and let the rods traverse freely. Fig. 9 represents a boat upset, when all the safety-rods drop down, as shewn at *a a* and *d d*, (this view not shewing the others) sufficient for the men to stand on and hold by the additional bilge-ribs *i i*, or by the keel, the T-heads now being lowermost, and sufficiently wide to receive their feet: *k k k k*, black lines painted on the keel exactly over the safety-rods, and *l l*, dots on the stern corresponding with the rods, to guide the seamen to the parts of the boat where the rods are placed, that they may be sure to find them with their feet, when, their weight being borne on the rods, they may cling with their hands to the boat, the bilge-ribs *i i* being added for them to take hold of. In launches, the rods should be curved to suit their build, and be cased in.